



SAVANNAH RIVER SITE

History Highlights

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Welcome to the historical highlights of the Savannah River Site. SRS was constructed during the early 1950s to produce the basic materials used in the fabrication of nuclear weapons, primarily tritium and plutonium-239, in support of our nation's defense programs. If you wish to view an in-depth history, please explore [SRS at Fifty](#), our 50th anniversary book (in PDF).

1950 - E. I. duPont de Nemours and Company was asked by the Atomic Energy Commission to design, construct and manage the Savannah River Plant.
-An area for the site was chosen.



1951 - Savannah River Ecology Laboratory begins ecological studies of SRS plants and animals.
-Construction began at the site.

1952 - Production of heavy water for site reactors begins in Heavy Water Rework Facility.

1953 - R-Reactor, the first production reactor, goes critical.

1954 - P-Reactor, L-Reactor, K-Reactor go critical.

-The first irradiated fuel is discharged.

-F-Canyon, a chemical separation facility, begins radioactive operations

1955 - C-Reactor goes critical.

-The first plutonium shipment leaves the site.

-H-Canyon, a chemical separation facility, begins radioactive operations

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1956 - Construction of the basic plant is complete.

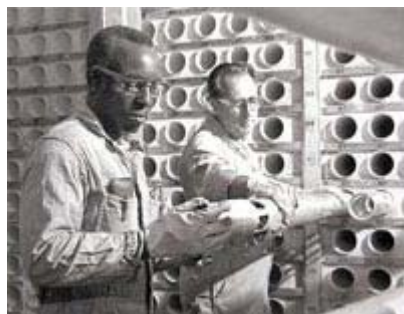
1963 - Receiving Basin for Off-Site Fuels receives first shipment of off-site spent nuclear fuel.

1964 - R-Reactor shut down.

1968 - L-Reactor shut down for upgrades.

1971 - K-Reactor becomes the first production reactor automatically controlled by computer.

1972 - The site is designated as the first National Environmental Research Park.



1981 - SRS begins environmental cleanup program.

-M-Area Settling Basin cleanup begins under the Resource Conservation and Recovery Act.

1982 - Heavy Water Rework Facility closed.

1983 - Ground is broken for construction of the Defense Waste Processing Facility.
-Wackenhut Services Incorporated begins providing security support services at SRS.

1985 - HB-Line begins producing plutonium-238 for NASA's deep-space exploration program.

-L-Reactor restarted and C-Reactor shut down.

-A full-scale groundwater remediation system constructed in M-Area.



1986 - Construction of Saltstone begins.

-Construction of the Replacement Tritium Facility begins.



1987 - duPont notifies DOE that it will not continue to operate and manage the Site.

1988 - K-, L-, and P-Reactors were shut down.

-Effluent Treatment Facility begins operations to treat low-level radioactive wastewater from F- and H- Area Separations facilities.

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1989 - The site is officially included on the National Priority List and becomes regulated by EPA.

-Westinghouse Savannah River Company assumes management and operation of site facilities.

1990 - Construction of a cooling tower for K-Reactor begins.
-Saltstone began operations.

1991 - Mixed Waste Management Facility first
SRS facility closed and certified under the
provisions of the Resource Conservation and
Recovery Act.
-L-Reactor shut down.
-M-Area Settling Basin closure completed.
-Cold War ended and production of nuclear
materials for weapons use at SRS stopped.



1992 - K-reactor operated briefly for last time and connected to cooling
tower.
-Secretary of Energy announces phaseout of all uranium processing.
-Non-radioactive operations begins at the Replacement Tritium Facility.



1993 - K-Reactor placed in cold-standby condition as
Nation's tritium source
-Non-radioactive test runs of the Defense Waste
Processing Facility begin.
-Construction begins on Consolidated Incineration
Facility.
-Tritium introduced into the Replacement Tritium
Facility and radioactive operations begins.
-Workforce Transition and Community Assistance
begins at SRS.

1994 - SRS Citizens Advisory Board was established.

1996 - The Defense Waste Processing Facility introduces radioactive
material into the vitrification process.
-K-Reactor placed in shutdown condition.
-F-Canyon restarts and begins stabilizing nuclear materials at SRS.

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1997 - First high-level radioactive waste tanks closed.

1998 - SRS is selected as the preferred site of three new plutonium
missions.

2000 - K Reactor building is converted to K Area
Materials Storage Facility.
-Record of Decision is announced, selecting SRS
as the site of new plutonium missions:
--MOX Fuel Fabrication Facility
--Pit Disassembly and Conversion Facility
--Plutonium Immobilization Facility



- WSRC Team earns the U.S. Department of Energy's top safety performance and program honor: Star Status.
- Defense Waste Processing Facility poured it's 1,000th canister of glassified radioactive waste.



2001 - Safety milestone: WSRC Operations employees worked ten million hours without an injury resulting in time away from work.

- First shipment of transuranic waste was shipped to DOE's Waste Isolation Pilot Project in New Mexico.

- Environmental cleanup mark surpassed with the removal of

industrial solvents from over four billion gallons of groundwater.

- The Defense Waste Processing Facility takes the lead worldwide with the pouring of four million pounds of environmentally acceptable glassified waste.

- Over \$44 million was saved in 2001 through the SRS employee suggestion program.

- SRS employee responses to the 2001 National Safety Council's safety perception survey say the site's safety culture is one of the best in the nation.

2002 - After 50 years of service to the nation, the F Canyon and FB Line facilities at SRS have completed their last production run to process legacy materials.

- A team led by the Savannah River Technology Center is embarking on a study that could ultimately lead to the extensive use of hydrogen-based energy sources as an alternative to expensive and polluting fossil energy. The research will examine the technical and economic issues associated with a new and innovative approach that could be used to produce hydrogen: using the heat from a nuclear power reactor to break water down into hydrogen and oxygen.



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2003 -Westinghouse Savannah River Company reached a significant milestone in late January when it successfully completed a continuous transfer of 30,000 gallons of highly radioactive Americium/Curium solution from the Savannah River Site's F Canyon to H Tank Farm. The transfer was significant because it was the last of F Canyon's highly radioactive material, and because it was the first time such a large amount of material was transferred at one time.

- The Savannah River Site's Defense Waste Processing Facility has begun radioactive operations with its second melter, which was installed during a successful six-month outage.

- SRS has shipped the last depleted uranium metal from M Area. More than 2,600 metric tons were shipped for disposition at Envirocare of Utah.
- After almost 40 years of safely receiving, handling and storing spent nuclear fuel, the employees of the Savannah River Site's Receiving Basin for Offsite Fuels (RBOF – pronounced “rub-off”) removed the last unit of fuel from the basin, shipping the bundle across the site to its new location, in preparation for RBOF's closure.



2004 - SRS has reached another milestone in the shipment of waste to a Department of Energy facility in New Mexico for safe, permanent disposal. The site shipped its 10,000th drum of transuranic waste to the Waste Isolation Pilot Plant (WIPP) near Carlsbad. As a result of the site's accelerated cleanup efforts, this 10,000-

drum milestone comes 12 years ahead of the original schedule.

- In an April visit to SRS, Secretary of Energy Abraham recognizes the Savannah River Technology Center for its continuous commitment to technical excellence and research, and designates it the Savannah River National Laboratory - one of only twelve DOE national laboratories.
- Bechtel Savannah River, Inc. Construction employees achieved their first-ever safety milestone of 15 million safe hours without an injury resulting in days away from work, beating the old mark of 13,890,367 million safe hours set on July 8, 1988. A typical construction site in the US would experience one lost time injury every 83,000 hours.
- Two prototype bomb disposal robots developed by the Savannah River National Laboratory are being deployed for military use in Iraq.
- History was made at SRS 50 years ago, when F Canyon became the world's first operational full-scale PUREX separation plant on Nov. 4, 1954. PUREX, or plutonium and uranium extraction, was the process used to extract plutonium and uranium products from materials irradiated in SRS reactors.

2005 - SRS recognized the completion of construction of the Tritium Extraction Facility's major process systems. The \$506 million project, is a key part of the supply system for the nation's nuclear weapons stockpile. The facility will be used to extract tritium from materials irradiated in Tennessee Valley Authority commercial nuclear reactors. Tritium is essential for modern nuclear weapons but it decays rapidly and must be replenished.



- SRS's first shipment of neptunium oxide arrived safely in Idaho, at the Argonne West Laboratory. The material represents the last of the United States' neptunium inventory, and the last of the materials that must be stabilized to satisfy commitments for stabilizing nuclear materials.

- With the completion of suspension activities, F Canyon has now been placed in “suspension mode.” F Canyon is the first major nuclear facility at SRS to undergo suspension and deactivation. Suspension involved safely

stopping and laying up all facility operations. Deactivation involves safely and permanently removing systems from service.

- The Defense Waste Processing Facility recently poured its seven millionth pound of radioactive glass. DWPF is the largest and most productive high-level waste glass vitrification facility in the world.



Additionally, over 1.64 million gallons of sludge slurry and 8.2 million curies of radioactivity have been processed through the vitrification facility.

- Blended low-enriched uranium from SRS is used by a Tennessee Valley Authority reactor to generate electricity -- the first of many tons that will be beneficially disposed as fuel rather than waste.

- The Tritium Facilities Modernization & Consolidation Project completed start-up, and replaces the gas purification and processing that took place in 232-H from the mid-1950s until April, 2005.

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2006 - WSRC employees worked over 7.5 million consecutive hours without an injury requiring days away from work and over 6 million hours without an injury requiring lost time or restricted activity. This is the longest period of time the Site has gone without a restricted case since WSRC assumed the SRS contract in 1989.

- SRS's nuclear material disposition facilities – H Canyon, HB Line, and the L Area Complex made major progress stabilizing materials such as neptunium, uranium, and plutonium and managing receipt and storage of spent nuclear fuels from across the United States and around the world.

- The Tritium Extraction Facility is in the last stages of preparing for full, hot operations.

- The Defense Waste Processing Facility, the largest waste vitrification plant in the world, celebrated a major event this year – 10 years of safe and successful radioactive operations.

- DOE designated the Savannah River National Laboratory (SRNL) as the Office of Environmental Management's (EM) "Corporate Laboratory." As the EM Corporate Laboratory, SRNL will apply its unique expertise and applied technology capabilities to reduce technical uncertainties to assist DOE sites across the nation in meeting cleanup requirements.

- Aiken County's new Center for Hydrogen Research opened its doors, with SRNL occupying half of this facility. The other half will be leased to universities and industries involved in hydrogen research to encourage collaboration, making the region a hub for hydrogen technology.

- WSRC has completed all deactivation work required in its current contract for F Area, resulting in a significant reduction in operational costs and making available additional resources for other cleanup efforts.

- Final remediation work in T Area, one of SRS's 14 industrial areas, was completed and represents SRS's first area closure. T Area was used for pilot-scale testing and evaluation to support the separation of uranium and

plutonium produced from five on-site reactors. The project was completed in approximately 36 months, 48 months ahead of the original schedule.

- The Mixed Oxide Fuel Fabrication Facility project, along with the rest of the future plutonium disposition complex, is seeing visible progress as site preparation nears completion.

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